



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,175	11/14/2003	Atsuhiro Sakurai	TI-35254	2913
23494 7590 12/06/2007 TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			EXAMINER FLANDERS, ANDREW C	
			ART UNIT 2615	PAPER NUMBER
			NOTIFICATION DATE 12/06/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com  
uspto@dlemail.itg.ti.com

**Office Action Summary**

Application No.

10/714,175

Applicant(s)

SAKURAI ET AL.

Examiner

Andrew C. Flanders

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6 is/are rejected.
- 7) ☒ Claim(s) 2 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 27 October 2007 have been fully considered but they are not persuasive.

Applicant alleges:

"Claims 1 and 4 recite subject matter not anticipated by Crockett. Claims 1 and 4 recite "calculating a cross-correlation  $R[k]$  for index value  $k$  between overlapping frames for a range of overlaps between  $S_s + k_{min}$  to  $S_s + k_{max}$  for only a fixed length overlap region less than an entire overlapping region." The OFFICE ACTION cites paragraphs [0152] to [0157] and step 210 illustrated in Figure 5 of Crockett as making obvious calculating the cross-correlation. These paragraphs of Crockett teach unspecified optimization in determination of a common splice point for multiple input channels. This fails to make obvious calculation of a cross-correlation as recited in claims 1 and 4. These paragraphs of Crockett fail to include any mention of correlation. These paragraphs of Crockett fail to include any teaching of the recited calculating range of "a range of overlaps between  $S_s + k_{min}$  to  $S_s + k_{max}$ ." The unspecified optimization of Crockett is between pairs of the multiple input channels. This differs from the cross-correlation between an analysis function and a synthesis recited in claims 1 and 4. Crockett teaches using "overlapping identified regions" in determining common splice points. However, Crockett includes no teaching that the cross-correlation calculation occurs within "a fixed length overlap region" that is less than the entire overlap. Crockett fails to teach any limitation on the overlap region for calculation of a cross-correlation. Accordingly, claims 1 and 4 are allowable over Crockett."

Examiner respectfully disagrees. Applicant states that these sections of Crockett fail to mention correlation, however, these paragraphs are directed to finding a common splice point of the signal. The system analyzes where to place this splice point. The regions are ANDed together to yield a common overlap segment. This step of

analyzing determines where to place the splice between two segments (i.e. the correlation between the segments). The section also discusses identifying potential splice points, i.e. "a range of overlaps."

Applicant further alleges:

"Claims 3 and 6 recite subject matter not anticipated by Crockett. Claims 3 and 6 recite the cross-correlation calculation employs "only a center half of the overlap region for  $k = 0$ ." The OFFICE ACTION cites paragraphs [0152] to [0157] and [0252] of Crockett as anticipating this limitation. Paragraphs [0152] to [0157] of Crockett teach selecting a common multichannel splice point considering "overlapping identified regions" between the channels. This teaching of Crockett fails to limit consideration to the "center half of the overlap region" as recited in claims 3 and 6. Paragraph [0252] includes no teaching of overlapping regions. Accordingly, claims 3 and 6 are allowable over Crockett."

Examiner respectfully disagrees. Para 252 teaches that the splice point is selected to be the optimum end point. This end point could fall within any area of the segment, one of which area being the center region, as claimed in claim 3.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 3, 4 and 6** are rejected under 35 U.S.C. 102(e) as being anticipated by Crocket (U.S. Patent Application Publication 2004/0122662).

Regarding **Claim 1**, Crocket discloses:

A method of time scale modification of a digital audio signal (Fig. 5) comprising the steps of:

analyzing an input signal in a set of first equally spaced, overlapping time windows having a first overlap amount  $S_{sub.a}$  (paras 117-122 and Fig. 5 steps 202-206);

selecting a base overlap  $S_{sub.s}$  for output synthesis corresponding to a desired time scale modification (Fig. 5 step 208);

calculating a cross correlation  $R[k]$  for index value  $k$  between overlapping frames for a range of overlaps between  $S_{sub.s} + k_{sub.min}$  to  $S_{sub.s} + k_{sub.max}$  for only a fixed length overlap region less than an entire overlapping region (paras 152-157 and Fig. 5 step 210);

selecting a value  $K$  yielding the greatest cross correlation value  $R[k]$  (para 252);

synthesizing an output signal in a set of second equally spaced, overlapping time window having a second overlap amount equal to  $S_s + K$  (para 196 and Fig. 5 step 226).

Regarding **Claim 3**, in addition to the elements stated above regarding claim 1, Crockett discloses:

said step of calculating the cross-correlation  $R[k]$  employs only a center half of the overlap region for  $k=0$  (paras 152-157 and 252).

Regarding **Claims 4 and 6**, see the preceding arguments with respect to claims 1 and 3, Crockett teaches the remaining features.

#### ***Allowable Subject Matter***

Claims 2 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7546. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/714,175  
Art Unit: 2615

Page 7

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**

acf